

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

Docket No: Q77322

Ryosuke KURIBAYASHI

Appln. No.: Unknown

Confirmation No.: Unknown

Group Art Unit: Unknown

Filed: February 9, 2004

Examiner: Unknown

For: OPTICAL SIGNAL REGENERATIVE REPEATER, OPTICAL GATE CONTROL METHOD,
AND OPTICAL SIGNAL REGENERATION METHOD

INFORMATION DISCLOSURE STATEMENT
UNDER 37 C.F.R. §§ 1.97 and 1.98

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In accordance with the duty of disclosure under 37 C.F.R. § 1.56, Applicant hereby notifies the U.S. Patent and Trademark Office of the documents which are listed on the attached PTO/SB/08 A & B (modified) form and/or listed herein and which the Examiner may deem material to patentability of the claims of the above-identified application.

One copy of each of the listed documents is submitted herewith.

1. Japanese Patent Application Publication No. 8-163047, published June 21, 1996.
2. H. Thiele et al., "Recirculating loop demonstration of 40 Gbit/s all-optical 3R data regeneration using a semiconductor nonlinear interferometer", Electronics Letters, Vol. 35, No. 3, February 4, 1999, pp. 230-231.
3. H. Kurita et al., "All-Optical 3R Regeneration based on Optical Clock Recovery with Mode-Locked LDs", Proc. of ECOC 99, PD3-6, (1999).

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4. K. Tajima, "All-Optical Switch with Switch-Off Time Unrestricted by Carrier Lifetime", Japan J. Appl. Phys. Vol. 32, Part 2, No. 12A, December 1, 1993, pp. L1746-L1749.
5. K. Tajima et al., "Ultrafast polarization-discriminating Mach-Zehnder all-optical switch", Appl. Phys. Lett. 67, (25), December 18, 1995, pp. 3709-3711.
6. M. Farries et al., "Optical fiber switch employing a Sagnac interferometer", Appl. Phys. Lett., (1), July 3, 1989, pp. 25-26.
7. Y. Ueno et al., "3.8-THz Wavelength Conversion of Picosecond Pulses Using a Semiconductor Delayed-Interference Signal-Wavelength Converter (DISC)", IEEE Photonics Technology Letters, Vol. 10, No. 3, March 1998, pp. 346-348.
8. J. Leuthold et al., "Novel 3R Regenerator Based on Semiconductor Optical Amplifier Delayed-Interference Configuration", IEEE Photonics Technology Letters, Vol. 13, No. 8, August 2001, pp. 860-862.
9. Japanese Patent Application Publication No. 2002-229081, published August 14, 2002.
10. Japanese Patent Application Publication No. 2001-249371, published September 14, 2001.
11. H. Kurita et al., "Ultrafast All-Optical Signal Processing with Mode-Locked Semiconductor Lasers", IEICE Trans. Electron., Vol. E81-C, No. 2, February 1998, pp. 129-139.
12. B. Lavigne et al., "Cascade of 100 optical 3R regenerators at 40Gbit/s Based on all-active Mach Zehnder interferometers", Proc. 27th Eur. Conf. on Opt. Comm. (ECOC 01- Amsterdam), pp. 290-291.

The present Information Disclosure Statement is being filed: (1) No later than three months from the application's filing date; (2) Before the mailing date of the first Office Action on the merits (whichever is later); or (3) Before the mailing date of the first Office Action after filing a request for

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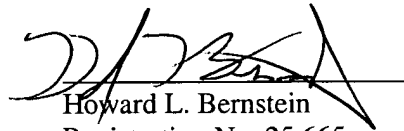
continued examination (RCE) under §1.114, and therefore, no Statement under 37 C.F.R. § 1.97(e) or fee under 37 C.F.R. § 1.17(p) is required.

In compliance with the concise explanation requirement under 37 C.F.R. § 1.98(a)(3) for foreign language documents, Applicant states that above references 1, 9 and 10 are discussed within the specification beginning at page 2, line 1.

The submission of the listed documents is not intended as an admission that any such document constitutes prior art against the claims of the present application. Applicant does not waive any right to take any action that would be appropriate to antedate or otherwise remove any listed document as a competent reference against the claims of the present application.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account. A duplicate copy of this paper is attached.

Respectfully submitted,


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WASHINGTON OFFICE

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CUSTOMER NUMBER

Date: February 9, 2004

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| Substitute for Form 1449 A & B/PTO <u>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</u> <i>(use as many sheets as necessary)</i> | | | | <i>Complete if Known</i> | |
| | | | | Application Number | Unknown |
| | | | | Confirmation Number | Unknown |
| | | | | Filing Date | February 09, 2004 |
| | | | | First Named Inventor | Ryosuke KURIBAYASHI |
| | | | | Art Unit | Unknown |
| | | | | Examiner Name | Unknown |
| Sheet | 1 | of | 1 | Attorney Docket Number | Q77322 |

| U.S. PATENT DOCUMENTS | | | | | |
|-----------------------|-----------------------|-----------------|--------------------------------------|--------------------------------|---|
| Examiner Initials* | Cite No. ¹ | Document Number | | Publication Date MM-DD-YYYY | Name of Patentee or Applicant of Cited Document |
| | | Number | Kind Code ² (if known) | | |
| | | US | | | |
| | | US | | | |

| FOREIGN PATENT DOCUMENTS | | | | | | | |
|--------------------------|-----------------------|---------------------------|---------------------|--------------------------------------|--------------------------------|---|--------------------------|
| Examiner Initials* | Cite No. ¹ | Foreign Patent Document | | | Publication Date MM-DD-YYYY | Name of Patentee or Applicant of Cited Document | Translation ⁶ |
| | | Country Code ³ | Number ⁴ | Kind Code ⁵ (if known) | | | |
| | | JP | 8-163047 | A | 06/21/1996 | | |
| | | JP | 2002-229081 | A | 08/14/2002 | | |
| | | JP | 2001-249371 | A | 09/14/2001 | | |
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| NON PATENT LITERATURE DOCUMENTS | | | |
|---------------------------------|-----------------------|--|--------------------------|
| Examiner Initials* | Cite No. ¹ | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city, and/or country where published. | Translation ⁶ |
| | | H. Thiele et al., "Recirculating loop demonstration of 40 Gbit/s all-optical 3R data regeneration using a semiconductor nonlinear interferometer", Electronics Letters, Vol. 35, No. 3, February 4, 1999, pp. 230-231. | |
| | | H. Kurita et al., "All-Optical 3R Regeneration based on Optical Clock Recovery with Mode-Locked LDs", Proc. of ECOC 99, PD3-6, (1999). | |
| | | K. Tajima, "All-Optical Switch with Switch-Off Time Unrestricted by Carrier Lifetime", Japan J. Appl. Phys. Vol. 32, Part 2, No. 12A, December 1, 1993, pp. L1746-L1749. | |
| | | K. Tajima et al., "Ultrafast polarization-discriminating Mach-Zehnder all-optical switch", Appl. Phys. Lett. 67, (25), December 18, 1995, pp. 3709-3711. | |
| | | M. Farries et al., "Optical fiber switch employing a Sagnac interferometer", Appl. Phys. Lett., (1), July 3, 1989, pp. 25-26. | |
| | | Y. Ueno et al., "3.8-THz Wavelength Conversion of Picosecond Pulses Using a Semiconductor Delayed-Interference Signal-Wavelength Converter (DISC)", IEEE Photonics Technology Letters, Vol. 10, No. 3, March 1998, pp. 346-348. | |
| | | J. Leuthold et al., "Novel 3R Regenerator Based on Semiconductor Optical Amplifier Delayed-Interference Configuration", IEEE Photonics Technology Letters, Vol. 13, No. 8, August 2001, pp. 860-862. | |
| | | H. Kurita et al., "Ultrafast All-Optical Signal Processing with Mode-Locked Semiconductor Lasers", IEICE Trans. Electron., Vol. E81-C, No. 2, February 1998, pp. 129-139. | |
| | | B. Lavigne et al., "Cascade of 100 optical 3R regenerators at 40Gbit/s Based on all-active Mach Zehnder interferometers", Proc. 27 th Eur. Conf. on Opt. Comm. (ECOC 01- Amsterdam), pp. 290-291. | |

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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² See Kind Codes of USPTO Patent Documents at www.uspto.gov, MPEP 901.04 or in the comment box of this document. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST. 3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to indicate here if English language Translation is attached.